

CLAIMS

What is claimed is:

1. A positioner for implantation adjacent a femoral hip implant for retaining the femoral hip implant in a femoral canal having a canal wall, the positioner comprising:

means for preventing the femoral hip implant from rising out of the femoral canal

beyond a predetermined position while permitting subsidence of the femoral hip implant down into the femoral canal; and

means for anchoring the means for preventing relative to the femoral canal.
2. The positioner of claim 1 further comprising means for spacing the femoral hip implant a predetermined distance from the canal wall.
3. A positioner for retaining a femoral hip implant in a femoral canal, the femoral canal having anterior, posterior, medial, and lateral aspects and a longitudinal axis along the femoral canal from a proximal position near the hip joint to a distal position nearer the knee joint, the femoral hip implant being surrounded at least in part by cement positioned between the femoral hip implant and the femoral canal, the femoral hip implant having a longitudinal axis that in use is approximately parallel to the femoral canal longitudinal axis, and a polished and tapered exterior surface that permits the implant to move relative to the cement and therefore to subside distally into the cement under load, the positioner comprising:

means for preventing the femoral hip implant from rising out of the femoral canal

beyond a predetermined position while permitting subsidence of the femoral hip implant distally into the cement ; and

means for anchoring the means for preventing relative to the femoral canal.

4. The positioner of claim 3 wherein the means for preventing comprises a member engageable with a portion of the femoral hip implant to prevent it from rising.
5. The positioner of claim 4 wherein the member extends over a portion of the femoral hip implant relative to the direction of the hip implant axis.
6. The positioner of claim 3 wherein the member is anchored relative to the cement such that the femoral hip implant is able to move distally relative to the member but is prevented from moving proximally beyond a predetermined position by engagement with the member
7. The positioner of claim 3 further comprising a body including first and second members extending at an angle from one another, the means for preventing including the first member and the means for anchoring including the second member, the first member being positionable over a portion of the femoral hip implant, the second member being positionable in the cement to anchor the positioner relative to the femoral canal.
8. The positioner of claim 7 further comprising means for spacing the femoral hip implant a predetermined distance from the lateral aspect of the femoral canal.
9. The positioner of claim 8 wherein the means for spacing comprises an engagement member connected to the body a predetermined distance from the second member, the engagement member engageable with the femoral hip implant and the second member engageable with the lateral aspect of the femoral canal to maintain a predetermined spacing between the femoral hip implant and the lateral aspect of the femoral canal.
10. The positioner of claim 9 wherein the engagement member comprises a projection extending medially from the second member toward the femoral hip implant.

11. The positioner of claim 9 wherein the engagement member comprises a projection extending distally from the first member to engage a recess formed in the femoral hip implant.
12. The positioner of claim 7 further comprising third and fourth members extending from the body, the second, third, and fourth members being positionable in the cement adjacent the lateral, anterior, and posterior aspects of the femoral canal respectively.
13. The positioner of claim 12 wherein at least the third and fourth members are biased inwardly toward the femoral hip implant axis in use to releasably grip the femoral hip implant prior to insertion of the femoral hip implant into the cement.
14. The positioner of claim 12 wherein each of the second, third, and fourth members further comprises a projection extending inwardly toward the femoral hip implant axis in use, the projections being engageable with the exterior surface of the femoral hip implant to maintain a predetermined spacing between the members and the femoral hip implant.
15. A positioner for retaining a femoral hip implant in a femoral canal having a longitudinal axis extending from an upper position near the hip joint to a lower position near the knee joint, and anterior, posterior, medial, and lateral aspects radially about the axis, the positioner comprising:
 - an anchor portion securing the positioner adjacent the femoral canal; and
 - a retention portion extending from the anchor portion and over a portion of the implant such that it limits upward axial motion of the femoral hip implant.
16. The positioner of claim 15 wherein the retention portion prevents proximal motion of the femoral hip implant while permitting distal motion of the femoral hip implant.

17. The positioner of claim 15 further including a member projecting from one of the anchor and retention portions to engage the femoral hip implant to maintain the femoral hip implant at a predetermined radial position within the femoral canal during insertion into the femoral canal but permitting distal motion of the femoral hip implant after insertion.
18. A femoral hip system for implantation in a hip joint formed by a femur and a pelvis, the femur having a femoral canal, the system comprising:
 - a femoral hip implant having a stem for insertion into the femoral canal; and
 - a retention member having an anchor portion securing the retention member in the femoral canal adjacent the hip implant, and a retention portion engageable with a portion of the femoral hip implant such that it blocks upward motion of the implant out of the canal while permitting downward motion of the implant into the canal.
19. The positioner of claim 18 further comprising a femoral head engageable with the femoral hip implant.
20. The positioner of claim 18 further comprising an acetabular cup engageable with the femoral hip implant and the pelvis.
21. The positioner of claim 18 further comprising bone cement positionable within the femoral canal to retain the anchor portion within the femoral canal.
22. A positioner for positioning a femoral hip implant in a femoral canal, the canal having a canal wall and a longitudinal axis extending from an upper position near the hip joint to a lower position near the knee joint, and anterior, posterior, medial, and lateral aspects radially about the axis, the femoral hip implant having a shoulder defining the top of the femoral hip implant, the positioner comprising:

an "L"-shaped body having a first leg positionable over a portion of the femoral hip implant relative to the canal axis and a second leg simultaneously positionable adjacent the canal wall to maintain a predetermined spacing between the femoral hip implant and the canal wall.

23. The positioner of claim 22 wherein the first leg is positionable over the shoulder of the femoral hip implant.

24. A method for positioning a femoral hip implant in a femoral canal, the method comprising:

providing a femoral hip implant configured to fit within a femoral canal;

inserting cement into the femoral canal;

inserting the femoral hip implant into the cement in the femoral canal;

inserting an implant retention member into the cement so that the implant retention member becomes firmly attached to the cement upon hardening of the cement and permits the femoral hip implant to subside down into the cement but prevents the femoral hip implant from rising up out of the cement beyond a predetermined position by engagement with the implant retention member.